

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Currently amended) A current detection method of an inverter that converts DC input into AC output and supplies the AC output to a load, comprising:
~~a step that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change of said circuit current caused by discharge.~~
allowing magnetic flux change occurring to a circuit wiring to act on a detecting conductor arranged in the vicinity of the circuit wiring, the magnetic flux change occurring because of a change in a circuit current due to discharge; and
detecting the change in the circuit current through the medium of the magnetic flux change by the detecting conductor.
2. (Withdrawn) A current detection circuit of an inverter that converts DC input into AC output and supplies the AC output to a load, comprising:
a current detection part that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change of said circuit current caused by discharge.
3. (Withdrawn) The current detection circuit of claim 2, wherein said current detection part detects magnetic flux change occurring in circuit wiring of said inverter by a detecting conductor that is provided adjacent to said circuit wiring.
4. (Withdrawn) The current detection circuit of claim 2, wherein said current detection part detects magnetic flux change occurring at a space of a core gap of a transformer of said inverter by a detecting conductor that is provided at the space of the core gap of said transformer.
5. (Withdrawn) The current detection circuit of claim 2, wherein said current

detection part is provided at any of an optional portion of circuit wiring leading from the DC input to the load, a side of the DC input, a primary side of a transformer of said inverter and a secondary side of the transformer, or at a plurality of places not less than two of the optional portion of the circuit wiring, the side of the DC input, the primary side and the secondary side.

6. (Withdrawn) The current detection circuit of claim 2 further comprising a current change detection part, wherein said current change detection part comprises:

a rectification part that rectifies a fluctuation voltage obtained by the magnetic flux change; and

a smoothing part that smoothes a rectified voltage given from said rectification part.

7. (Withdrawn) The current detection part of claim 3, wherein said current detection part constitutes said detecting conductor and a portion of said circuit wiring as an independent discrete element.

8. (Withdrawn) The current detection circuit of claim 6, wherein said rectification part is constituted by Schottky diode.

9. (Withdrawn) The current detection circuit of claim 6, wherein said current change detection part includes a filter that extracts change in a current due to discharge including disconnection discharge and dielectric breakdown discharge.

10. (Withdrawn) The current detection circuit of claim 3 further comprising a core that forms a common magnetic path for said circuit wiring and said detecting conductor.

11. (Currently amended) An anomaly detection method of an inverter that converts DC input into AC output and supplies the AC output to a load, comprising:

~~a step that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change in said circuit current caused by discharge; and~~

~~a step that detects based on a result of a detection of the change in said circuit current whether or not anomaly exists in a current route including said load.~~

allowing magnetic flux change occurring to a circuit wiring to act on a detecting conductor arranged in the vicinity of the circuit wiring, the magnetic flux change occurring because of a change in a circuit current due to discharge; and

detecting the change in the circuit current through the medium of the magnetic flux change by the detecting conductor so as to detect based on a result of the detecting of the change in the circuit current whether or not anomaly exists in a current route including the load.

12. (Withdrawn) An anomaly detection circuit of an inverter that converts DC input into AC output and supplies the AC output to a load, comprising:

a current detection part that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change in said circuit current caused by discharge; and

a detection signal output part that, based on a result of a detection of said current detection part, outputs a detection signal representative of whether or not anomaly exists in a current route including said load.

13. (Withdrawn) The anomaly detection circuit of claim 12, wherein said current detection part detects magnetic flux change occurring in circuit wiring of said inverter by a detecting conductor that is provided adjacent to said circuit wiring.

14. (Withdrawn) The anomaly detection circuit of claim 12, wherein said inverter provides a control part that receives said detection signal and stops an inverter operation at the time of behavioral anomaly.

15. (Withdrawn) The anomaly detection circuit of claim 12 further comprising a current change detection part, wherein said current change detection part comprises:

a rectification part that rectifies a fluctuation voltage obtained by the magnetic flux change; and

a smoothing part that smoothes a rectified voltage given from said rectification part.

16. (Withdrawn) The anomaly detection circuit of claim 12, wherein said current detection part is provided at any of an optional portion of circuit wiring leading from the DC input to the load, a side of the DC input, a primary side of a transformer of said inverter and a secondary side of the transformer, or at a plurality of places not less than two of the optional portion of the circuit wiring, the side of the DC input, the primary side and the secondary side.

17. (Withdrawn) The anomaly detection circuit of claim 13, wherein said current detection part constitutes said detecting conductor and a portion of said circuit wiring as an independent discrete element.

18. (Withdrawn) The anomaly detection circuit of claim 15, wherein said rectification part is constituted by Schottky diode.

19. (Withdrawn) The anomaly detection circuit of claim 13 further comprising a core that forms a common magnetic path for said circuit wiring and said detecting conductor.

20. (Withdrawn) The anomaly detection circuit of claim 14, wherein control part includes a display driving part, and gives output of the display driving part to an indicator so that the behavioral anomaly can be displayed.

21. (Withdrawn) The anomaly detection circuit of Claim 14, wherein said detection signal output part and said control part are formed of an IC, which is single in number.

22. (Withdrawn) The anomaly detection circuit of claim 15, wherein said current change detection part includes a filter that extracts change in a current due to discharge including disconnection discharge and dielectric breakdown discharge.

23. (Withdrawn) An electronic device including an inverter, comprising:
an anomaly detection circuit that detects anomaly caused by disconnection discharge in circuit wiring of said inverter or proximity discharge between high and low voltage parts of said circuit wiring; and
a control part that stops an operation of said inverter when said anomaly detection circuit detects the anomaly.

24. (Withdrawn) An electronic device including an inverter, comprising:
an anomaly detection circuit that detects anomaly caused by disconnection discharge of circuit wiring of said inverter or proximity discharge between high and low voltage parts of said circuit wiring;
a control part that stops an operation of said inverter when said anomaly detection circuit detects the anomaly;

a display driving part that generates a display driving output representative of the anomaly when said anomaly detection circuit detects the anomaly; and
an indicator that displays behavioral anomaly by the display driving output generated in said display driving part.

25. (Withdrawn) A display device including an inverter, comprising:
an anomaly detection circuit that detects anomaly caused by disconnection discharge of circuit wiring of said inverter or proximity discharge between high and low voltage parts of said circuit wiring; and
a control part that stops an operation of the inverter when said anomaly detection circuit detects the anomaly.

26. (Withdrawn) An information processing device including a display device, said display device comprising:
a fluorescent light tube lighting device including an inverter;
an anomaly detection circuit that detects anomaly caused by disconnection discharge of circuit wiring of said inverter or proximity discharge between high and low voltage parts of said circuit wiring; and
a control part that stops an operation of the inverter when said anomaly detection circuit detects the anomaly.

27. (Currently amended) A test method using an inverter that converts DC input into AC output and supplies the AC output to a load, comprising:
~~a step that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change in said circuit current caused by discharge; and~~
~~a step that decides based on a result of a detection of the change in said circuit current whether or not anomaly exists in a current route including said load.~~
allowing magnetic flux change occurring to a circuit wiring to act on a detecting conductor arranged in the vicinity of the circuit wiring, the magnetic flux change occurring because of a change in a circuit current due to discharge; and
detecting the change in the circuit current through the medium of the magnetic flux change by the detecting conductor so as to decide based on a result of the detecting of the change in the circuit current whether or not anomaly exists in a current route including the load.

28. (Withdrawn) A test device comprising:
an inverter that converts DC input into AC output and supplies the AC output to a load;
and
a current detection part that detects change in a circuit current of said inverter through the medium of the magnetic flux change due to the change in said circuit current caused by discharge, wherein
whether or not anomaly exists in a current route including said load is decided based on a result of a detection of said current detection part.

29. (Withdrawn) A lighting device including an inverter, comprising:
an anomaly detection circuit that detects anomaly caused by disconnection discharge of circuit wiring of said inverter or ground-fault discharge; and
a control part that stops an operation of said inverter when said anomaly detection circuit detects the anomaly.

30. (new) A current detection method, comprising:
allowing a magnetic flux change produced by a circuit to act on a detecting conductor located in a vicinity of the circuit, with the magnetic flux change occurring due to a change in a circuit current due to a discharge; and
detecting the change in the circuit current through the medium of the magnetic flux change on the detecting conductor.